

## PATENT ABSTRACTS OF JAPAN

(11)Publication number : 09-306715

(43)Date of publication of application : 28.11.1997

(51)Int.Cl. H01F 1/20  
 G23C 14/08  
 H01F 17/04  
 H01F 27/255  
 H01F 37/00

(21)Application number : 08-119944

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(22)Date of filing : 15.05.1996

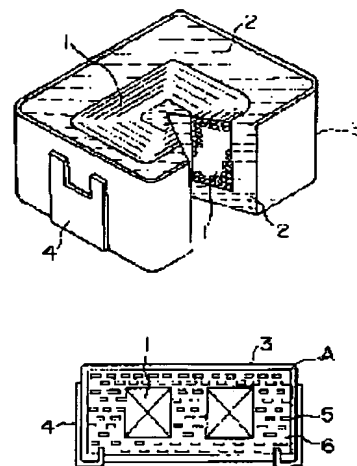
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## (54) ELECTRONIC DEVICE AND METHOD OF FABRICATING THE SAME

## (57)Abstract:

**PROBLEM TO BE SOLVED:** To provide an electronic device in which a composite magnetic layer made of soft magnetic powders in a flat and/or needle shape and an organic binder having an oxide film on the surface is used as a magnetic core, thereby integrally forming a coil and the magnetic core, and enabling a large inductance to be obtained with the same outer dimension.

**SOLUTION:** An inductor includes a doughnut-shaped coil 1, a magnetic core 2, and a resin casing 3 in which the coil 1 and the magnetic core 2 are hermetically housed. A pair of electrodes 4 are provided on a pair of outer faces and the bottom face of the resin casing 3. A composite magnetic layer A made of magnetic powders 5 and an organic binder 6 having an oxide film on the surface is provided between the coil 1 and the resin casing 3 without a gap. The magnetic core 2 corresponds to the composite magnetic layer A. Since the oxide film is provided on the surface, there is no conduction by contact, so that it is unnecessary to provide a clearance with the coil 1. Since the coil and the magnetic core 2 can be integrally formed, a large inductance can be obtained and a magnetic loss can be reduced because of the construction of a closed magnetic path.



## LEGAL STATUS

[Date of request for examination]

27.12.2002

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

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